

Ho et al.

S/N: 10/063,829

REMARKS

Claims 1-27 are pending in the present application. In the Office Action mailed May 12, 2004, the Examiner rejected claims 1-2, 4, 7-10, 12, 14-16, 18-19, 21, 23-24, and 26 under 35 U.S.C. §102(b) as being anticipated by Wang et al. (USP 6,535,821). The Examiner next rejected claims 3, 11, and 27 under 35 U.S.C. §103(a) as being unpatentable over Wang et al in view of Dumoulin et al. (USP 6,584,337). Claims 13, 17, 20, 22, and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wang et al. in view of Lang et al. (USP 5,671,741). Applicant appreciates the indication that claims 5, 6, 8, and 18 are allowable.

As noted above, the Examiner rejected claims 1-2, 4, 7-10, 12, 14-16, 18-19, 21, 23-24, and 26 under 35 U.S.C. §102(b). However, it is assumed that the Examiner intended to use 35 U.S.C. §102(e) since the present application was filed on May 16, 2002 which is approximately ten months before the patenting of Wang et al.

Additionally, the Examiner provided no basis or explanation of the §102(b) rejection. The Examiner merely states that the claimed invention is "clearly anticipated." However, Examiner's Note 7.15 from MPEP §706.02(i) states that accompanying a statement such as "clearly anticipated" or "anticipated", must be "an explanation at the end of the paragraph." MPEP §706.02(i). As such, Applicant hereby respectfully requests reasoned statements by the Examiner demonstrating the Examiner's interpretation of the claims as to how the claims are "clearly anticipated" by the references cited. Since the Examiner failed to provide the required reasoning, Applicant requests any further action on this case be in non-final form.

To anticipate a claim, the reference must teach each and every element of the claim. See MPEP §2131. Applicant believes one of ordinary skill in the art will readily acknowledge numerous distinctions between the current invention and the art cited by the Examiner. As stated, the Examiner did not provide any analysis or reasoning for the §102(b) rejections; therefore, Applicant is not obligated to respond to unsubstantiated rejections. However, Applicant has chosen to highlight some of the clear distinctions in order to eliminate confusion.

Wang et al. teaches a system and method of bolus chasing angiography with adaptive real-time computed tomography (CT). More particularly, Wang et al. teaches a system designed to drive a patient table "to chase the contrast bolus". Abstract, USP 6,535,821. Wang et al. teaches a table control unit that may be fed with control parameters to adaptively transport a patient table to chase the motion of a contrast bolus so as to synchronize bolus peak and imaging aperture to minimize discrepancies between a predicted bolus position and a measured bolus

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position. See Col. 11, lns. 62-67. The dynamic controlling of an imaging scan as taught by Wang et al. is limited to adaptively controlling a patient table to chase or otherwise track a contrast bolus having been injected into a scan subject.

In contrast, the present invention, as defined by claim 1 and amended herein, includes the step of allowing modification of initial table motion control data and initial scan parameters while automatically moving table and acquiring MR data. As such, the present invention differentiates table motion control data from scan parameters. In addition, claim 1 in calling for a method of MR image acquisition is explicit that the present invention allows modification of scan parameters in addition to modification of initial table motion control data. While claim 1 is not so limited, one skilled in the art will readily recognize that adjusting or otherwise modifying scan parameters would include allowing changes to the number of sections imaged, section spacing, section scan locations, as well as acquisition plane. In contrast to scan parameters, Wang et al. only teaches adaptive control of the table to track a contrast bolus in a subject and, as such, it necessarily follows that Wang et al. only teaches a change in table velocity. As such, Applicant respectfully believes that which is called for in claim 1 is patentably distinct from that taught and/or suggested by the art of record.

Regarding the rejection of claim 10, Applicant respectfully refers the Examiner to remarks set forth above with respect to claim 1. In short, claim 10 calls for an MRI apparatus having a computer programmed to, in part, allow reception of user input during table translation and, as soon as received, modify translation in response thereto and allow reception of user input of scan parameters and, if so, receive modified MR data acquisition in response thereto. As set forth above, Wang et al. fails to teach or suggest a system that allows a user to modify scan parameters during an MR scan.

Similarly, and with respect to claim 19, Wang et al. fails to teach or suggest a computer readable storage medium having stored thereon a computer program comprising instructions which, when executed by a computer, cause the computer to move a patient table through an MR scanner and simultaneously acquire MR data and allow user input in response thereto to manipulate at least one of patient table speed, direction, and scan parameters. Likewise, and referring to claim 23, Wang et al. fails to teach or suggest a method of identifying a tumor in a patient comprising the steps of placing a patient on a movable table, translating the movable table and acquiring MR data as a patient moves through a magnetic field, reconstruct MR images of patient anatomy that the movable table is translating, penalizing MR images and, if an area of interest is identified for further study, returning the movable table such that the area of interest is

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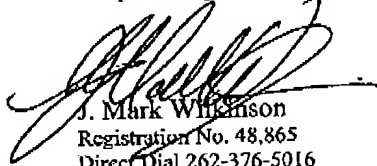
within the magnetic field in modifying the MR data acquisition parameters in real-time, and acquiring one of higher resolution MR data in different MR plane data to allow further analysis of the area of interest.

The Examiner had indicated the allowability of claims 5, 6, 7, and 8. Accordingly, Applicant presents new claims 28-33. Applicant respectfully believes that claims 28-33 are in condition for allowance as depending from otherwise allowable claims or incorporating previously indicated allowable subject matter.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-33.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,



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Dated: July 28, 2004
Attorney Docket No.: GEMS8081.119

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